

**RESPONSE TO ELECTION OF SPECIES REQUIREMENT  
AND PRELIMINARY AMENDMENT**

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Serial No. 10/714,767

Dkt.: P-11092.00

Filing Date: November 17, 2003

Title: IMPLANTABLE HEART VALVE PROSTHETIC DEVICES HAVING INTRINSICALLY  
CONDUCTIVE POLYMERS

**Amendments to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) An implantable heart valve sewing prosthesis, ~~the device~~ comprising a ring shaped body having an external surface including an intrinsically conductive polymer having a resistivity of less than about 2000 ohms per square.
2. (Currently amended) The ~~device~~ prosthesis of claim 1, ~~in which the device is an annuloplasty ring,~~ wherein the ring shaped body is substantially closed upon itself.
3. (Currently amended) The ~~device~~ prosthesis of claim 1, ~~in which the device is an annuloplasty band,~~ wherein the ring shaped body has an annular gap and is not closed upon itself.
4. (Currently amended) The ~~device~~ prosthesis of claim 1, ~~in which the device~~ wherein the prosthesis is a prosthetic heart valve sewing ring.
5. (Currently amended) The ~~device~~ prosthesis of claim 1, ~~in which the device includes a fabric sheath forming at least part of wherein the ring~~ external surface includes at least a part of a sheath of fabric, wherein the, ~~in which the~~ fabric incorporates the intrinsically conductive polymer.
6. (Currently amended) The ~~device~~ prosthesis of claim 1, ~~in which the intrinsically conductive~~ wherein the polymer has a resistivity of less than 1000 ohms per square.

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7. (Currently amended) A blood contacting implantable biomedical device comprising an external surface having an intrinsically conductive polymer layer, wherein the device is selected from ~~the group consisting of~~ heart valve annuloplasty rings, heart valve annuloplasty bands, mechanical prosthetic heart valves, and bioprosthetic heart valves.
8. (Currently amended) The device of claim 7, ~~in which the device~~ wherein the external surface includes a fabric having the polymer layer formed thereover.
9. (Currently amended) The device of claim 8, ~~in which~~ wherein the fabric is formed of a plurality of individual filaments, ~~in which~~ and wherein the polymer layer is at least in part formed by a polymer coating over the individual filaments.
10. (Currently amended) The device of claim 8, ~~in which~~ wherein the fabric is formed of a plurality of individual filament bundles formed of a plurality of filaments, ~~in which~~ and wherein the polymer layer is at least in part formed by a polymer coating over the individual filament bundles.
11. (Currently amended) The device of claim 8, ~~in which~~ wherein the fabric is formed of a plurality of individual fibers formed of a plurality of filament bundles formed of a plurality of filaments, ~~in which~~ and wherein the polymer layer is at least in part formed by a polymer coating over the individual fibers.
12. (Currently amended) The device of claim 8, ~~in which~~ wherein the polymer layer is a product of *in situ* polymerization on the fabric.

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13. (Currently amended) The device of claim 8, ~~in which~~ wherein the fabric is formed at least in part by filaments of integrally formed intrinsically conductive polymer.

14. (Currently amended) The device of claim 8, ~~in which~~ wherein the polymer layer comprises polypyrrole.

15. (Currently amended) The device of claim 8, ~~in which~~ wherein the polymer layer comprises a polypyrrole derivative.

16. (Currently amended) The device of claim 8, ~~in which~~ wherein the polymer layer has a surface resistivity between about 10 and 1000 ohms per square.

17. (Currently amended) The device of claim 8, ~~in which~~ wherein the polymer layer includes a polymer selected from ~~the group consisting of~~ polyaniline, polypyrrole, poly(vinylferrocene), polyactelyne, polythiophene, polybithiophene, and derivatives and combinations thereof.

18. (Currently amended) The device of claim 8, ~~in which~~ wherein the polymer layer includes a polymer selected from ~~the group consisting of~~ polypyrrole and derivatives thereof.

19. (Currently amended) The device of claim 18, ~~in which~~ wherein the polymer is doped with dialkyl-naphthalene sulfonate.

20. (Original) An annuloplasty prosthesis for implanting in a heart valve annulus in a patient, the annuloplasty prosthesis comprising a ring shaped body comprising an intrinsically conductive polymer.

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21. (Currently amended) The annuloplasty prosthesis of claim 20, ~~in which~~ wherein the ring shaped body has an external surface having an intrinsically conductive polymer coating over at least part of the surface.

22. (Currently amended) The annuloplasty prosthesis of claim 20, ~~in which~~ wherein the ring shaped body has an external surface comprising fabric, wherein the fabric comprises an intrinsically conductive polymer.

23. (Currently amended) The annuloplasty prosthesis of claim 22, ~~in which~~ wherein the intrinsically conductive polymer forms a layer over the fabric.

24. (Currently amended) The annuloplasty prosthesis of claim 23, ~~in which~~ wherein the polymer is selected from ~~the group consisting of~~ polypyrrole and derivatives thereof.

25. (Currently amended) The annuloplasty prosthesis of claim 24, ~~in which~~ wherein the polymer is doped with dialkyl-napthalene sulfonate.

26. (Currently amended) The annuloplasty prosthesis of claim 20, ~~in which~~ wherein the intrinsically conductive polymer has a resistivity of less than 1000 ohms per square.

27. (Original) A prosthetic heart valve for implanting in a patient, the heart valve comprising:

an annular housing having a flow channel therethrough for the passage of blood, an inside surface forming the flow channel for blood, and an outside surface for facing heart tissue;

a valve flow control member moveably secured to the housing and having an open position and a closed position; and

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a ring shaped body disposed about the annular housing outside surface, wherein the ring shaped body has external surface comprising an intrinsically conductive polymer.

28. (Currently amended) The prosthetic heart valve of claim 27, ~~in which~~ wherein the flow control member includes a leaflet pivotally coupled to the housing.

29. (Currently amended) The prosthetic heart valve of claim 27, ~~in which~~ wherein the ring shaped body external surface has the intrinsically conductive polymer present as a coating over at least part of the external surface.

30. (Currently amended) The prosthetic heart valve of claim 27, ~~in which~~ wherein the ring shaped body has an external surface comprising fabric, wherein the fabric includes the intrinsically conductive polymer.

31. (Currently amended) The prosthetic heart valve of claim 30, ~~in which~~ wherein the intrinsically conductive polymer forms a layer over the fabric.

32. (Currently amended) The prosthetic heart valve of claim 31, ~~in which~~ wherein the polymer is selected from ~~the group consisting of~~ polypyrrole and derivatives thereof.

33. (Currently amended) The prosthetic heart valve of claim 32, ~~in which~~ wherein the polymer is doped with dialkyl-napthalene sulfonate.

34. (Currently amended) The prosthetic heart valve of claim 27, ~~in which~~ wherein the intrinsically conductive polymer has a resistivity of less than 1000 ohms per square.

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35. (Original) A stented bioprosthetic heart valve for implanting in a patient, the heart valve comprising:

an annular housing having a flow channel therethrough for the passage of blood, an inside surface forming the flow channel for blood, and an outside surface for facing heart tissue;

at least one moveable tissue leaflet secured to the housing and having an open position and a closed position; and

a ring shaped body disposed about the annular housing outside surface, wherein the ring shaped body has external surface comprising an intrinsically conductive polymer.

36. (Currently amended) The stented bioprosthetic heart valve of claim 35, ~~in which~~ wherein the ring shaped body external surface has the intrinsically conductive polymer present as a coating over at least part of the external surface.

37. (Currently amended) The stented bioprosthetic heart valve of claim 35, ~~in which~~ wherein the ring shaped body has an external surface comprising fabric, wherein the fabric includes the intrinsically conductive polymer.

38. (Currently amended) The stented bioprosthetic heart valve of claim 37, ~~in which~~ wherein the intrinsically conductive polymer forms a layer over the fabric.

39. (Currently amended) The stented bioprosthetic heart valve of claim 38, ~~in which~~ wherein the polymer is selected from ~~the group consisting of~~ polypyrrole and derivatives thereof.

40. (Currently amended) The stented bioprosthetic heart valve of claim 39, ~~in which~~ wherein the polymer is doped with dialkyl-naphthalene sulfonate.

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41. (Currently amended) The stented bioprosthetic heart valve of claim 35, ~~in which~~  
wherein the intrinsically conductive polymer has a resistivity of less than 1000 ohms per  
square.
42. (New) The prosthesis of claim 1, wherein the prosthesis is an annuloplasty  
prosthesis.
43. (New) The prosthesis of claim 42, wherein the annuloplasty prosthesis is an  
annuloplasty ring or an annuloplasty band.
44. (New) The prosthesis of claim 4, wherein the prosthesis is a prosthetic heart valve  
sewing cuff.